Mini-helix 1

Helix 2

Helix 1

Helix 3

Helix 4

C-terminus

N-terminus

Helix 3

Helix 4
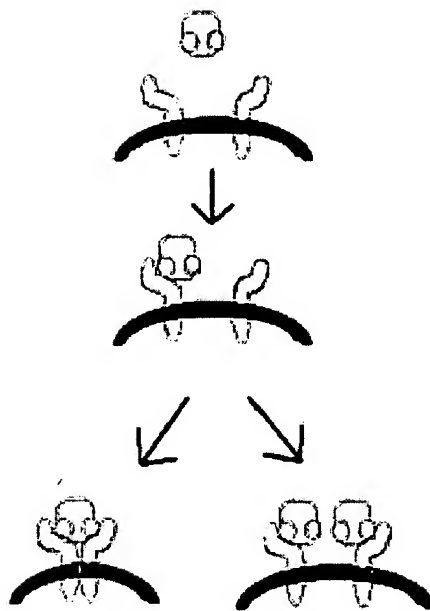
Site 2

Site 1

Helix 1

Figure 1

Figure 2

```
   1 gggatcctta ttctatatct cttggtattt agtgtaaaaa ttttaaaatc tttacctagc
  61 aatcttgagg aagaaacttg ataactgata atacatgaga ttgttaccta agtgaaatat
 121 aatcctatat attcaacaaa ctttagagaa ataagataaa ttttaaagta aatgacttct
 181 gtagttttat agatcctcca aaccaatcta gtctcagatc tcaccttcat catttctctc
 241 atttcctttt ggcctaatta atcaaaatcc ttcctagaat gttcatttct ggccagtatg
 301 tcttcctgaa tatgaataag aaataaaata ccatttgatg tttgaaatta tggggtaat
 361 ctcaatgacg gaaatagatg accaggaaaa gggaaacgaa tgcctgattc attatattca
 421 tgaagatatc aaaggtttat aaagccaata tctgggaaag agaaaaccgt gagacttcca
 481 gatcttctct ggtgaagtgt gtttcctgca acgatcacga acatgaacat caaaggatcg
 541 ccatggaaag ggtccctcct gctgctgctg gtgtcaaacc tgctcctgtg ccagagcgtg
 601 gcccccttgc ccatctgtcc cggcggggct gcccgatgcc aggtgaccct tcgagacctg
 661 tttgaccgcg ccgtcgtcct gtcccactac atccataacc tctcctcaga aatgttcagc
 721 gaattcgata aacggtatac ccatggccgg gggttcatta ccaaggccat caacagctgc
 781 cacacttctt cccttgccac ccccgaagac aaggagcaag cccaacagat gaatcaaaaa
 841 gactttctga gcctgatagt cagcatattg cgatcctgga atgagcctct gtatcatctg
 901 gtcacggaag tacgtggtat gcaagaagcc ccggaggcta tcctatccaa agctgtagag
 961 attgaggagc aaaccaaacg gcttctagag ggcatggagc tgatagtcag ccaggttcat
1021 cctgaaacca aagaaaatga gatctaccct gtctggtcgg gacttccatc cctgcagatg
1081 gctgatgaag agtctcgcct ttctgcttat tataacctgc tccactgcct acgcagggat
1141 tcacataaaa tcgacaatta tctcaagctc ctgaagtgcc gaatcatcca caacaacaac
1201 tgctaagccc acatccattt catctatttc tgagaaggtc cttaatgatc cgttccattg
1261 caagcttctt ttagttgtat ctcttttgaa tccatgcttg ggtgtaacag tctcctctt
1321 aaaaaataaa aactgactcc ttagagacat caaaatccaa aaaaaaaaaa aaaaaaaaa
1381 aaaaaaaa
```

Figure 3

```
  1   mnikgspwkg  slllllvsnl  llcqsvaplp  icpggaarcq  vtlrdlfdra
 51   vvlshyihnl  ssemfsefdk  rythgrgfit  kainschtss  latpedkega
101   qqmnqkdfls  livsilrswn  eplyhlvtev  rgmqeapeai  lskaveieeq
151   tkrllegmel  ivsqvhpetk  eneiypvwsg  lpslqmadee  srlsayynll
201   hclrrdshki  dnylkllkcr  iihnnnc
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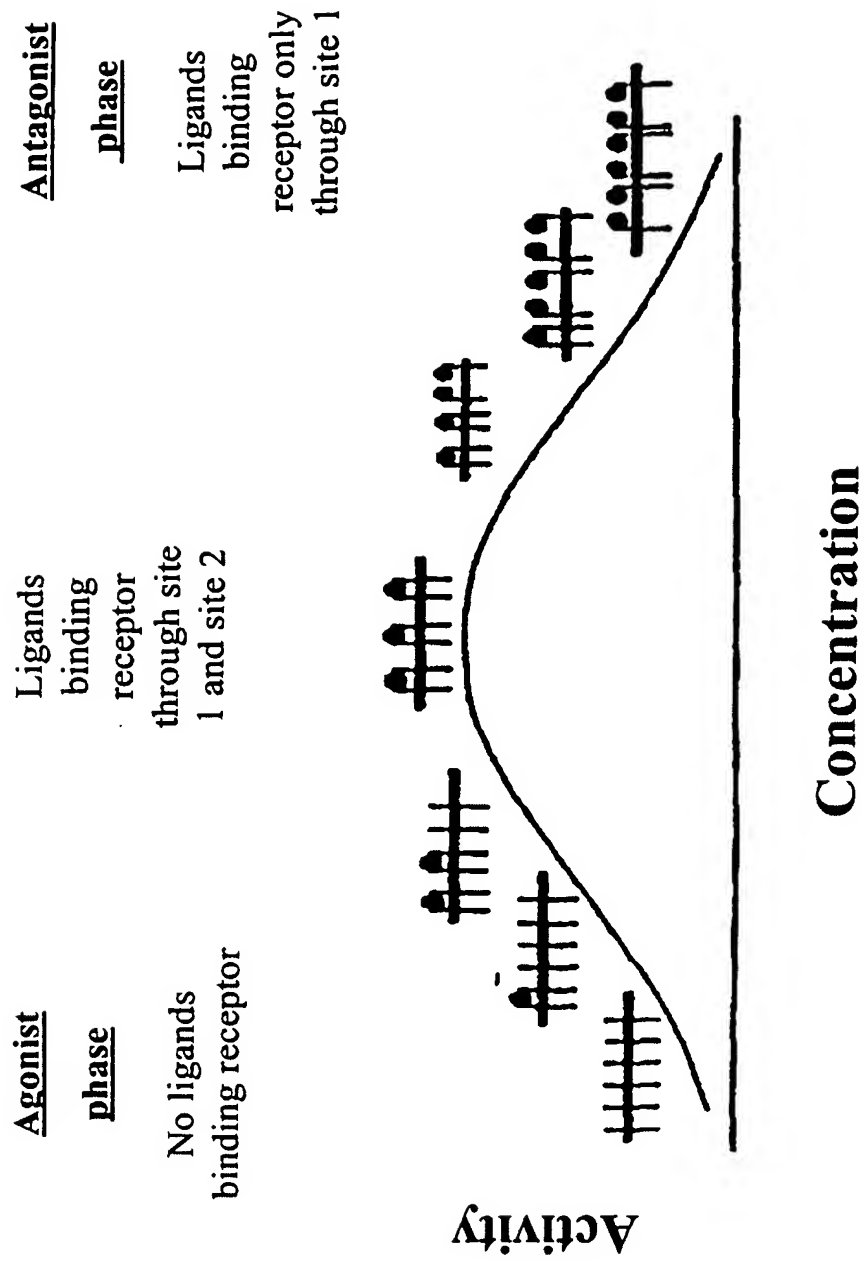
Figure 4

MLPICPGGAARCQVTLRDLFDRAVVLSHYIHNLSSE
MFSEF**DKRYTHGRGFITKAINS**CHTSSLATPEDKE
QAQQMNQKDFLSLIVSILRSWNE**PLYHLVTEVRG**
MQEAPEAILSKAVEIEEQTKRLLEGMELIVSQVHPE
TKENEIYPVWSGLPSLQMA**DEESRLSAYYNLLH**CL
RRDSHKIDNYLKLLKCRIIHNNNC

Figure 5

Antagonist

phase

Ligands
binding
receptor only
through site 1

Ligands
binding
receptor
through site
1 and site 2

Agonist

phase

No ligands
binding receptor

Activity

Concentration
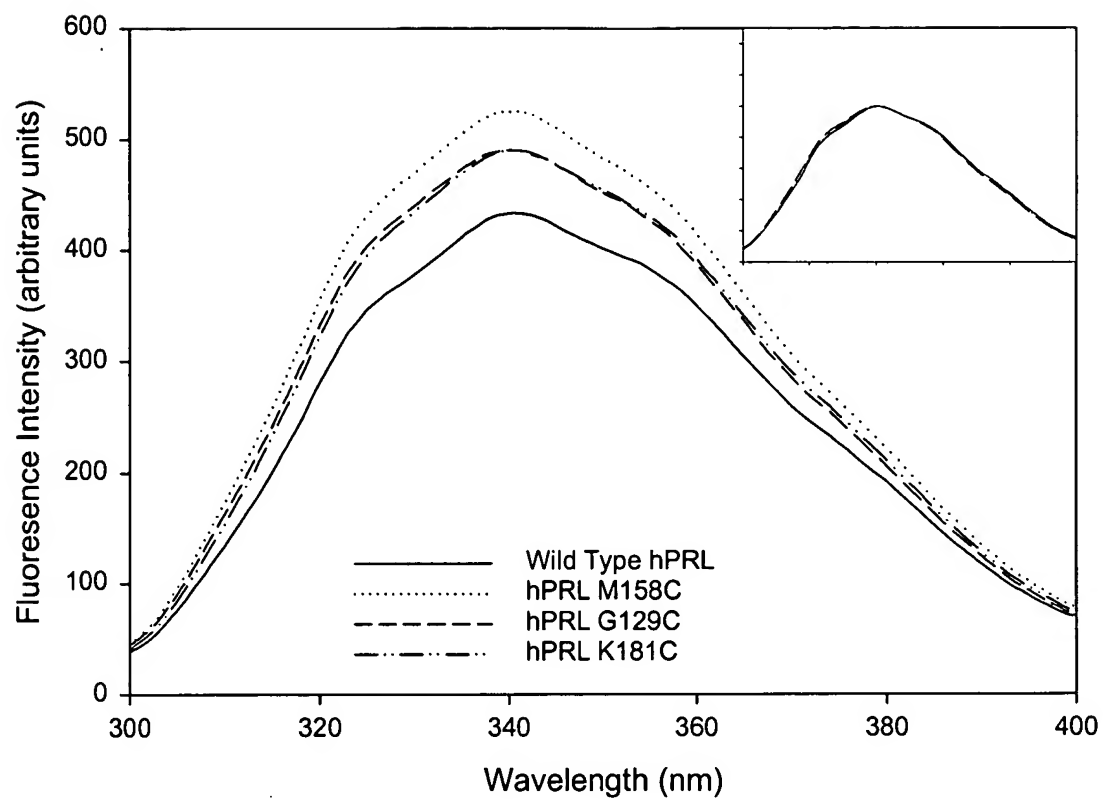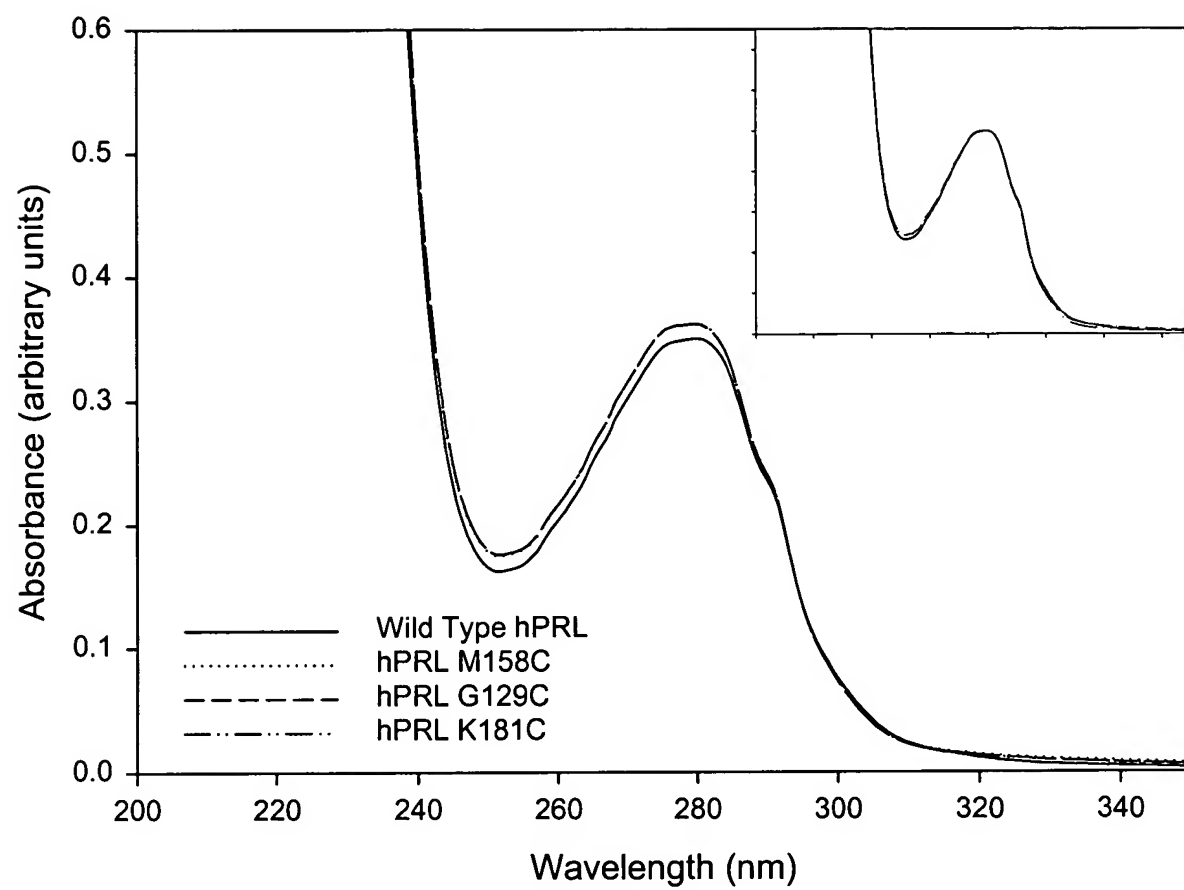
Figure 6

Figure7

Figure 8

Figure 9

Figure 10

M158C

RU

Response

120
100
80
60
40
20
0
-20

-100 -30 40 110 180 250 320 390 460 530 600

Time   sec

G129C

RU

Response

120
100
80
60
40
20
0
-20

-100 -30 40 110 180 250 320 390 460 530 600

Time   sec

K181C

RU

Response

120
100
80
60
40
20
0
-20

-100 -30 40 110 180 250 320 390 460 530 600

Time   sec
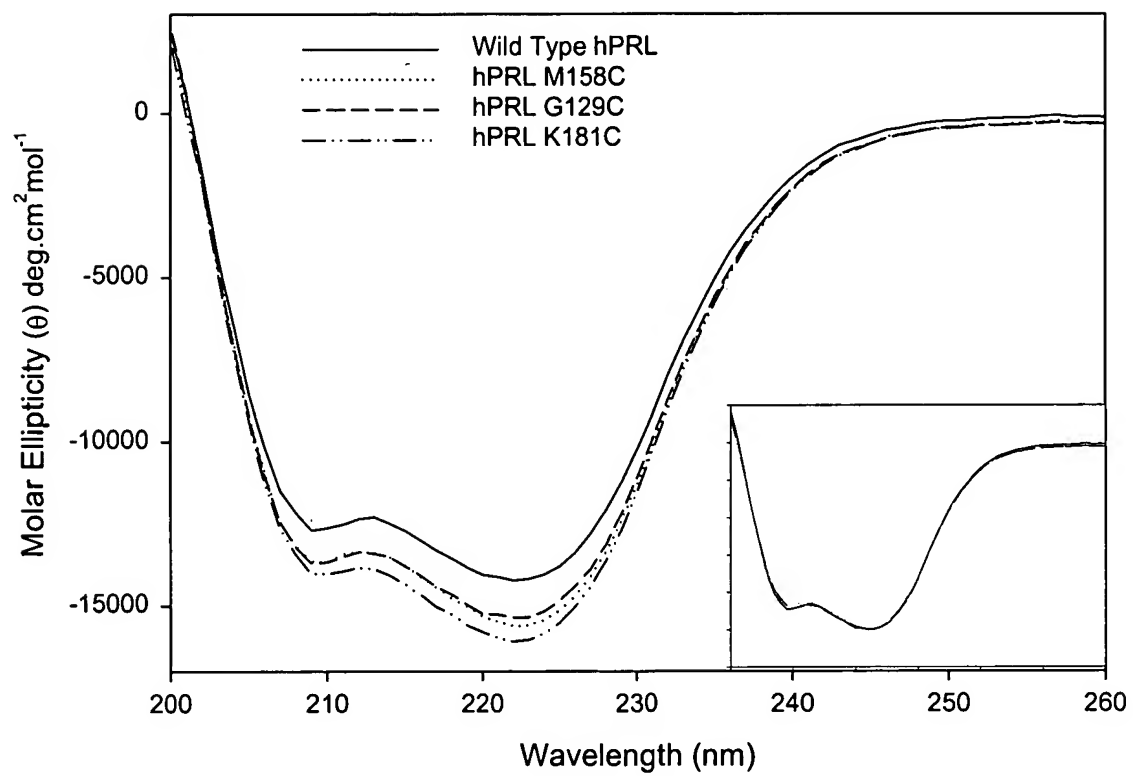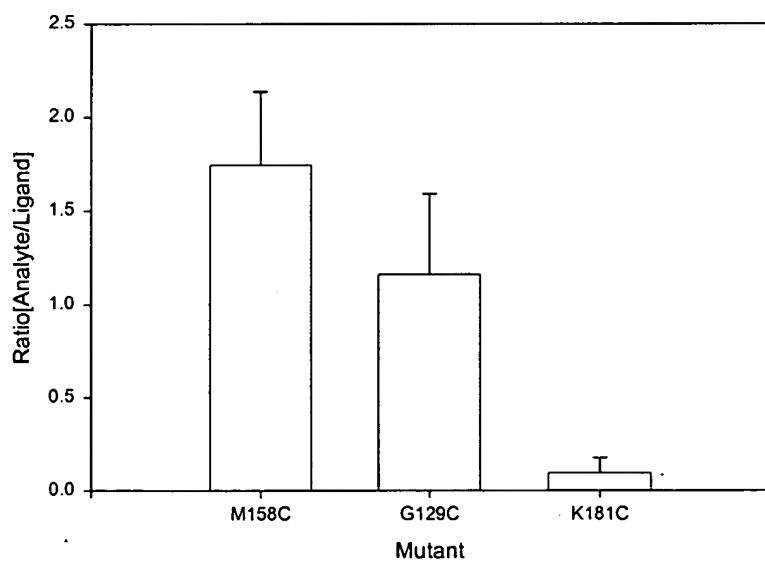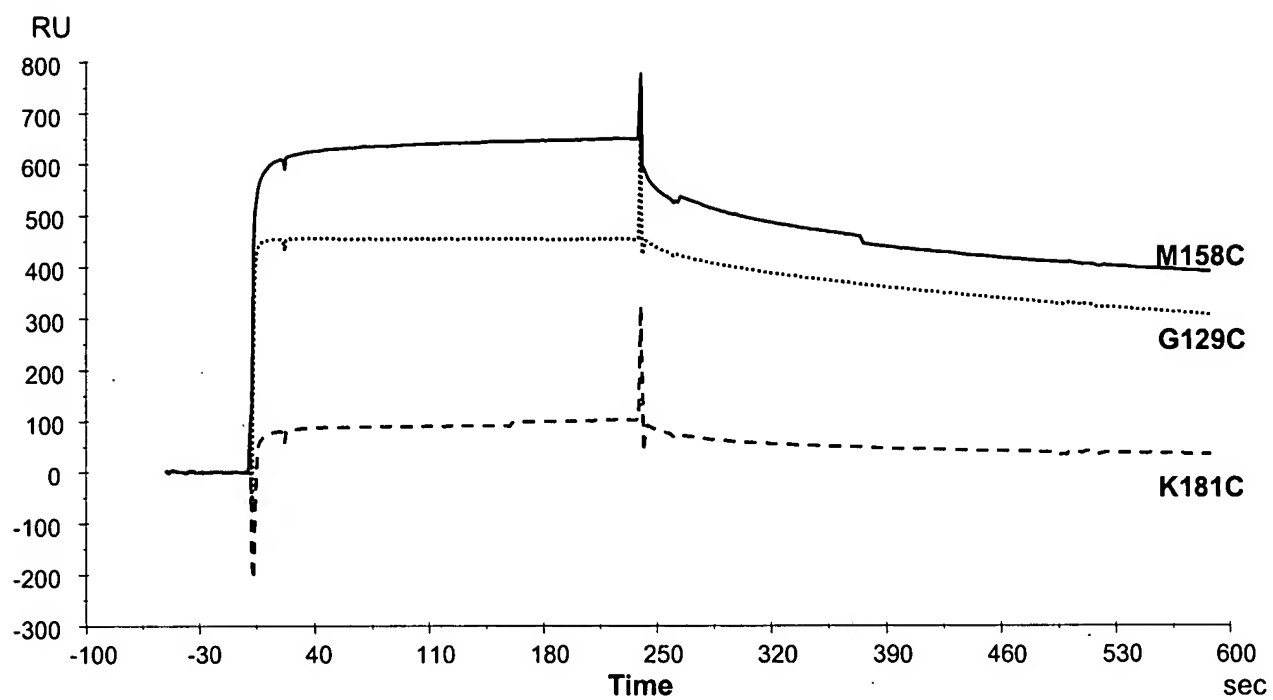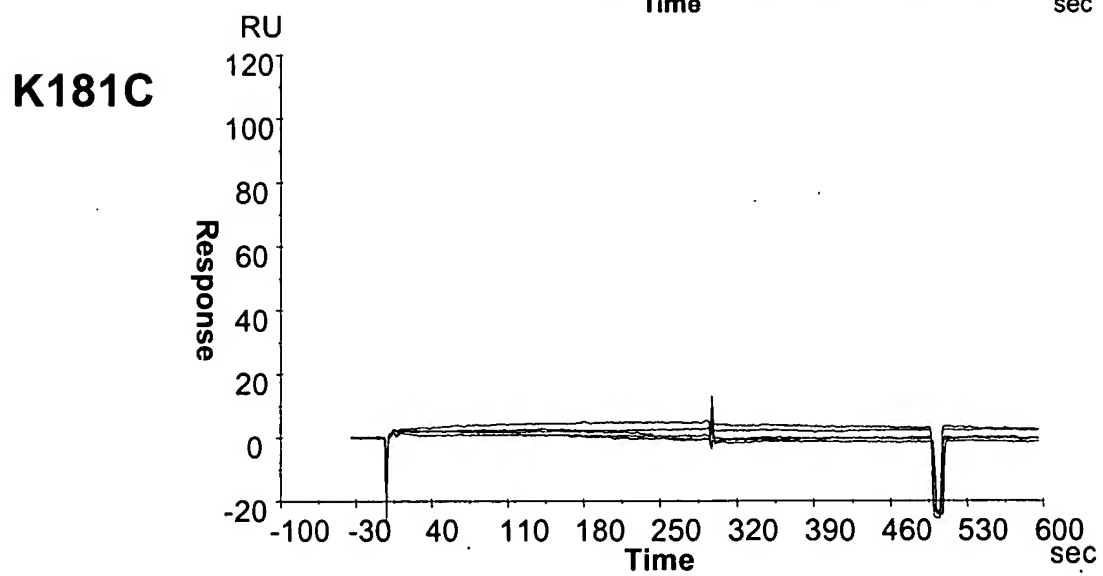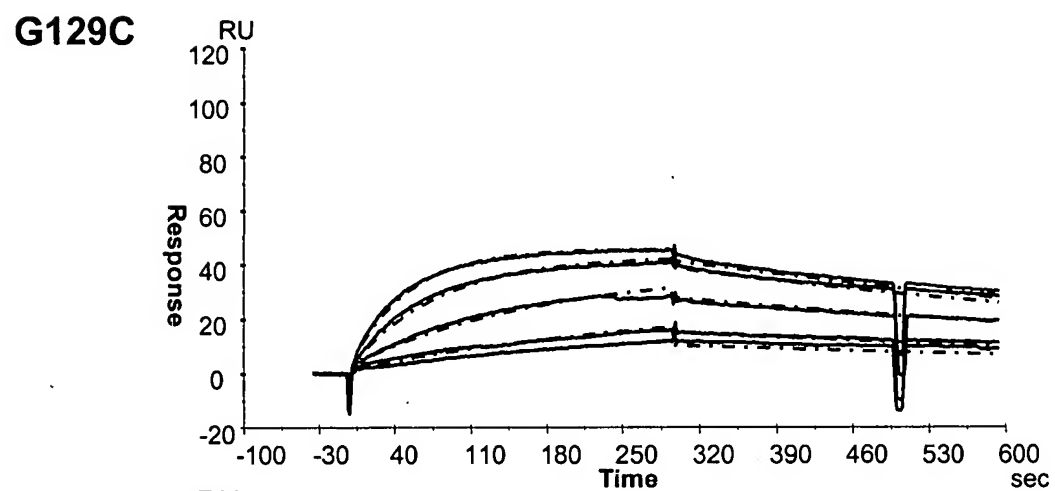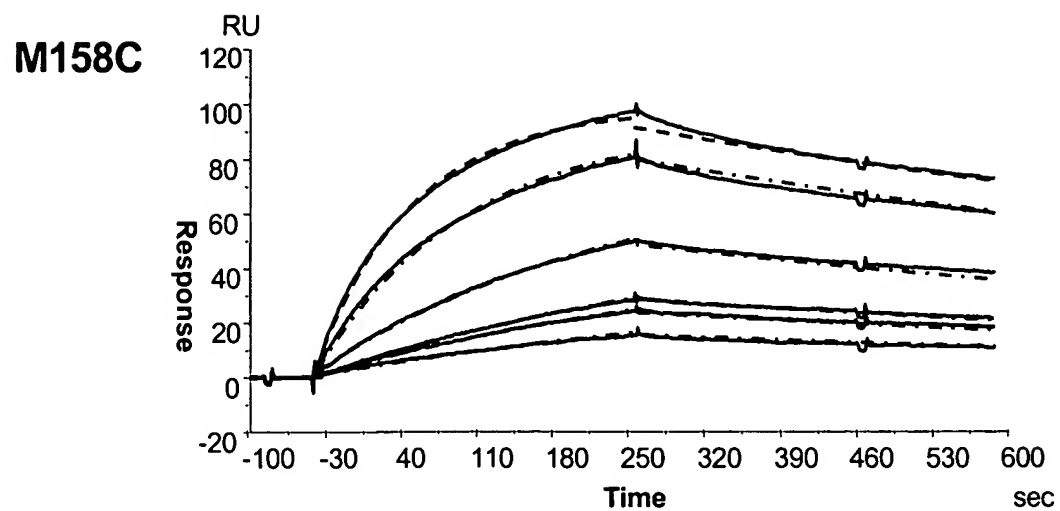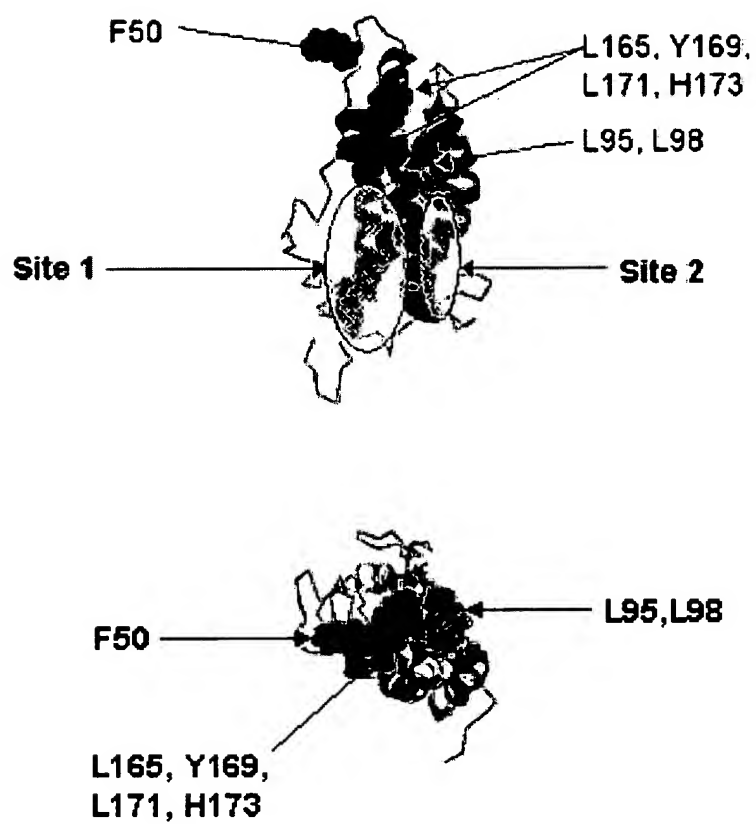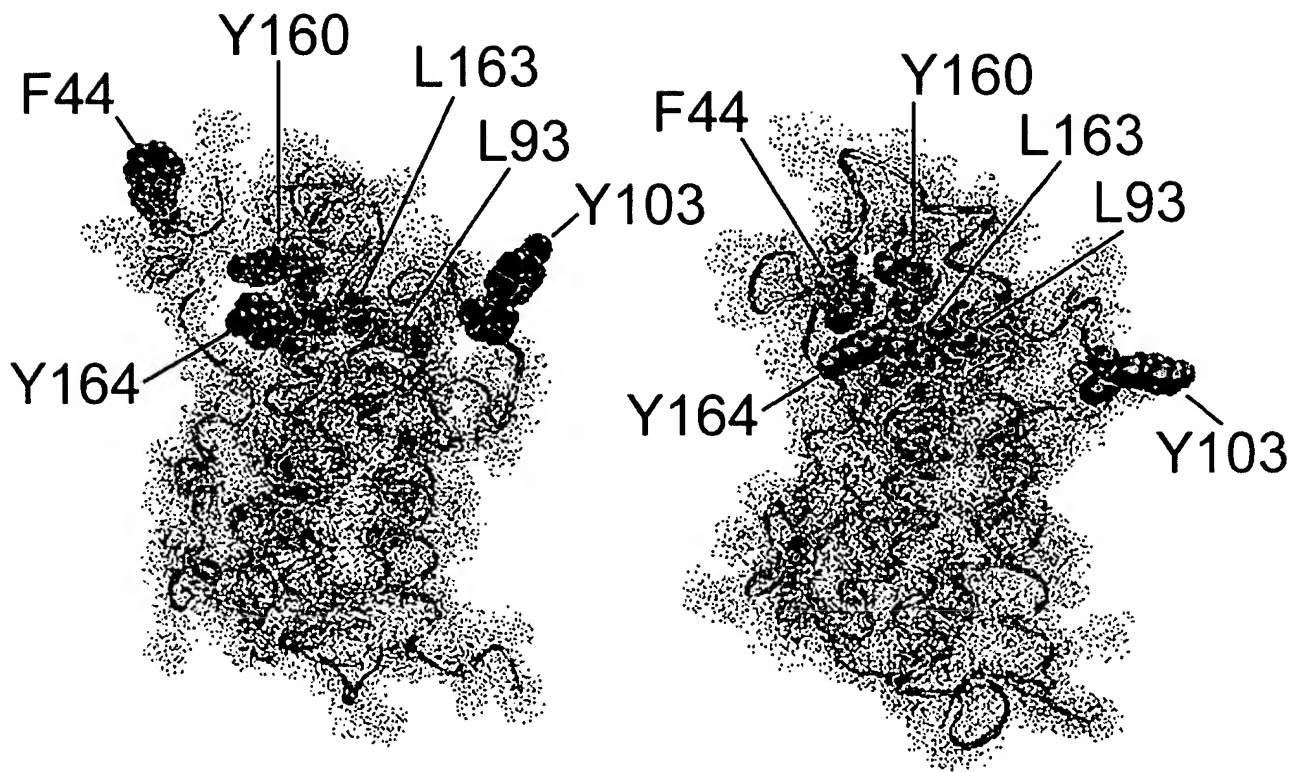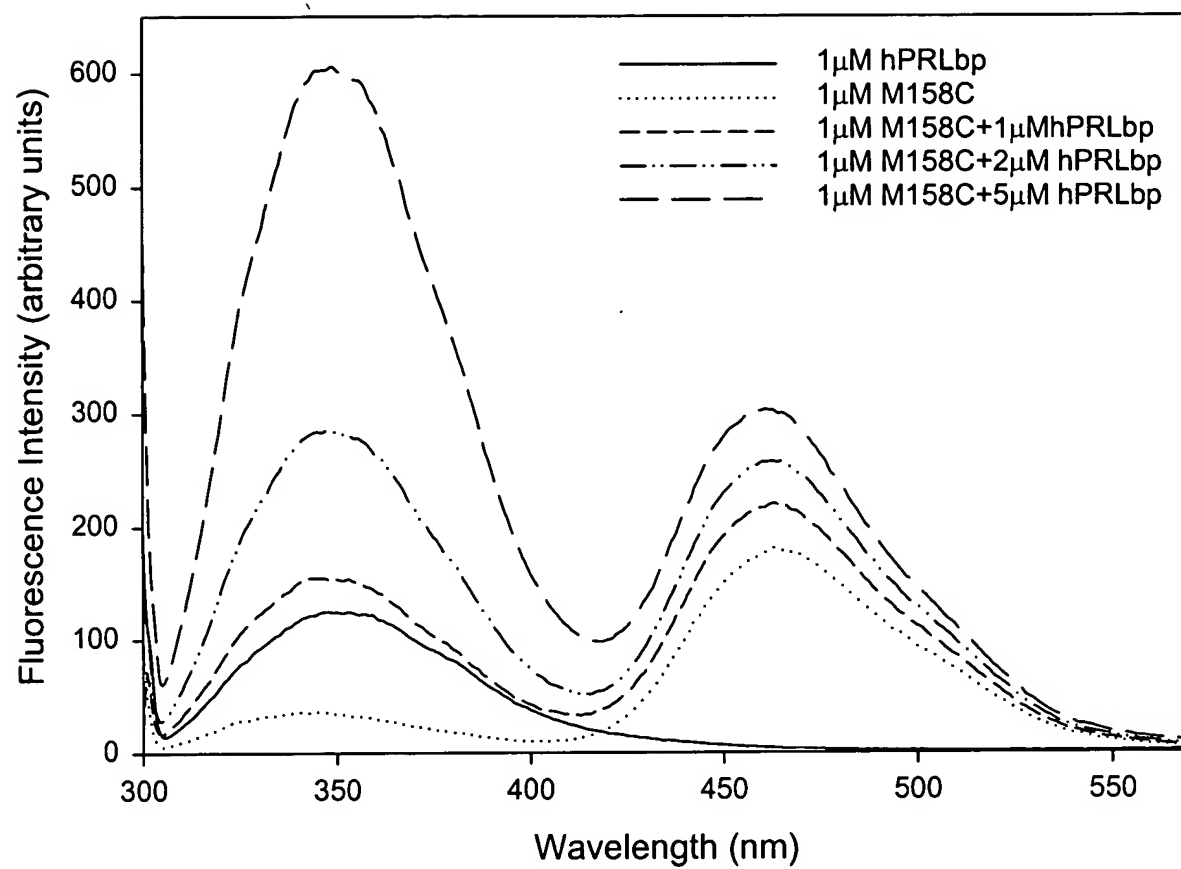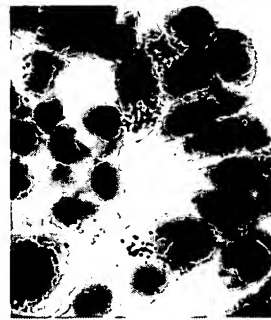
Figure 11

Figure 12

Figure 13

Figure 14

T47D cells treated for
48 hours with 500 nM
Δ41-52 human prolactin

T47D cells treated for 48
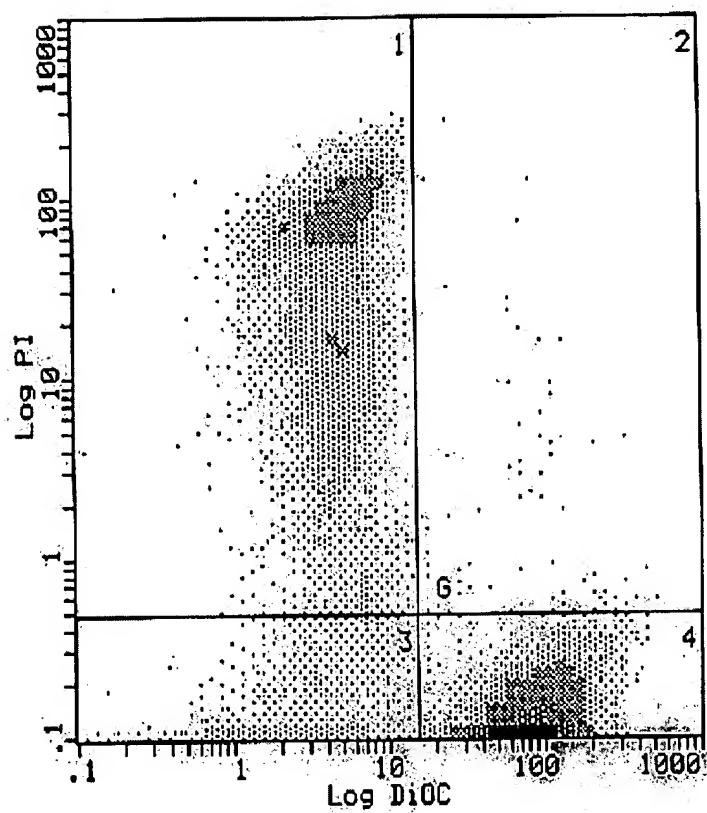hours with 0.3 nM wild-
type human prolactin

Figure 15

Figure 16

Live Jurkat T-Cells
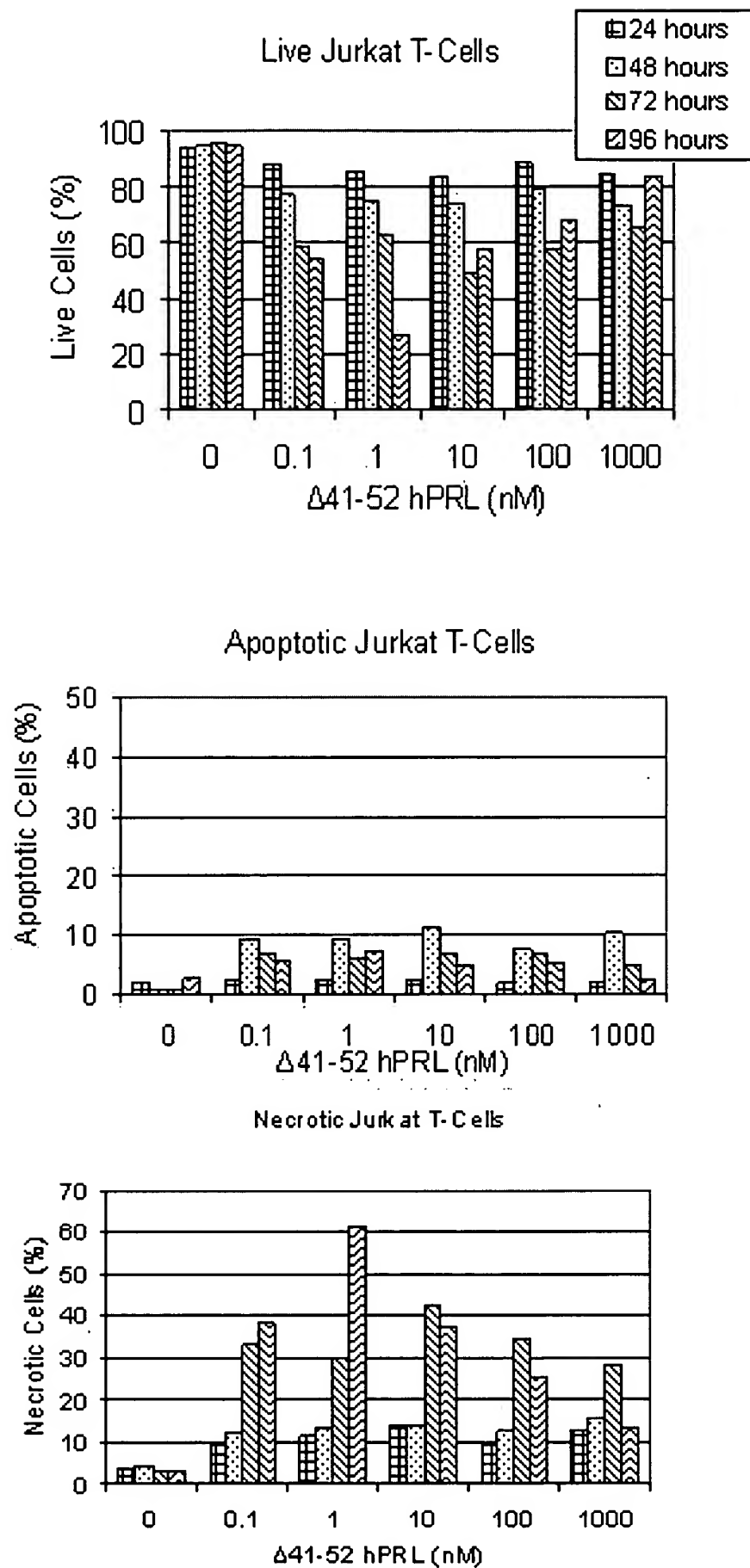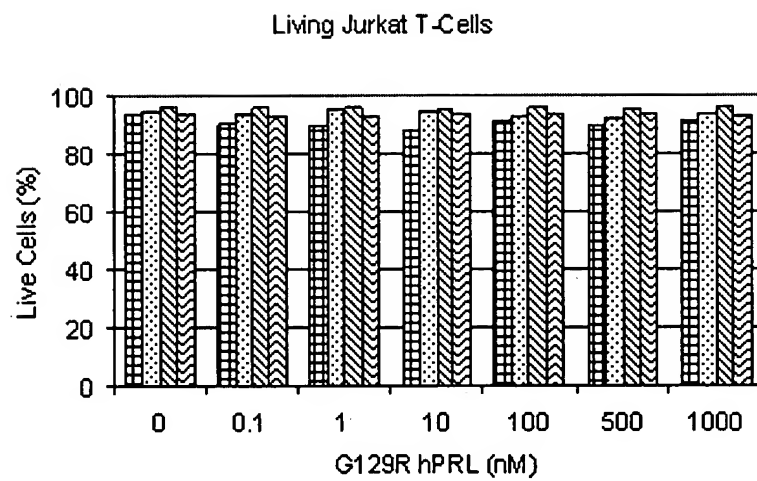
Apoptotic Jurkat T-Cells

Necrotic Jurkat T-Cells

Figure 17

Living Jurkat T-Cells

Living Jurkat T-Cells

Figure 18